transmitting said signal values via said transmission channel, forming transmitted signal values;

wherein said receiver implements the steps of:

receiving said transmitted signal values, forming received signal values;

mapping said received signal values onto detected symbols; and

converting said detected symbols into a detected information;

and wherein a measuring comprises the steps of:

forming a reference signal by mapping successive, detected symbols onto signal values; and

calculating said transmission quality of said transmission channel based on said reference signal and on said received signal values.

2. (Amended) The method according to claim 1, wherein said step of calculating said transmission quality comprises the steps of:

determining a noise signal part of said received signal values upon employment of said reference signal; and

calculating the transmission quality of the transmission channel based on said reference signal and said noise signal part.

3. (Amended) The method according to claim 2, wherein said step of calculating said transmission quality further comprises the steps of:

determining an average power of said reference signal and of said noise signal part; and

calculating a signal-to-noise ratio as a criterion for said transmission quality based on said average power of said reference signal and on said average power of said noise signal part.

4. (Amended) The method according to claim 2, wherein said step of calculating said transmission quality further comprises the step of:

-2-

determining an average power of said reference signal and of said noise signal part, said step of determining said average power of said noise signal part comprises calculating an average power of a difference of said received signal values and said reference signal.

5

5. (Amended) The method according to claim 2, wherein said step of calculating said transmission quality further comprises the step of:

determining an average power of said reference signal and of said noise signal part, said average power of said noise signal part being determined by

10   forming a difference of said average power of said received signal values and said average power of said reference signal.

6. (Amended) The method according to claim 3, further comprising the step of allocating a symbol error rate or a bit error rate to said calculated signal-to-noise

15   ratio for specifying a measured value for said transmission quality.

7. (Amended) A transmission system for transmitting digital information, comprising:

a transmitter comprising:

an encoding device for representing said digital information as

20   symbols; and

a modulator for mapping said symbols onto signal values for said

transmission via a transmission channel;

a receiver comprising:

a demodulator for mapping received signal values onto detected

25   symbols; and

a decoding device for representing said detected symbols as detected

digital information;

and

a device for measuring a transmission quality of said transmission channel for

30   said transmission of digital information comprising:

-3-

a modulator for generating a reference signal, in that signal values are allocated to successively detected symbols; and

a transmission quality determination device for determining said transmission quality of said transmission channel based on said reference signal and on said received signal values.

8. (Amended) The transmission system according to claim 7, further comprising:

a device for determining a reference signal average power of said reference signal;

a device for determining a received signal value average power of said received signal values;

a subtractor for subtracting said reference signal average power from said received signal value average power and for generating a noise signal part average power of a noise signal part; and

a divider for calculating a signal-to-noise ratio as a criterion for said transmission quality by division of said reference signal average power by said noise signal part average power.

9. (Amended) The transmission system according to claim 7, further comprising:

a device for determining a reference signal average power of said reference signal;

a subtractor for subtracting said reference signal from said received signal values and for generating a noise signal part;

a device for determining a noise signal part average power of said noise signal part; and

a divider for calculating a signal-to-noise ratio as a criterion for said transmission quality by dividing said reference signal average power by said noise signal part average power.

10. (Amended) A transmission system according to claim 7, further comprising:

-4-